

**NASA Space Shuttle Program (SSP)**  
**Mission Management Team (MMT) STS-114**  
**Minutes of Meeting**  
**July 29, 2005**

The STS-114 Flight Day 4 (FD4) MMT meeting, chaired by Deputy Manager, SSP, JSC-MA/Wayne Hale, was held July 29, 2005 at 1:00 p.m. Central Time (CT), Johnson Space Center (JSC), Building 30, Room 118. Member organizations supported at JSC and remote sites by video teleconference. Roster sheets for those that participated in this meeting are available. Following are highlights of the issues that were discussed.

**A. Introduction – MMT Chairman**

Mr. Hale presented a photograph of the International Space Station (ISS) and docked Space Shuttle as they crossed the sun. The photo is located at:

<http://antwrp.gsfc.nasa.gov/apod/astropix.html>

**B. Flight Status – Mission Operations Directorate (MOD) Failure Summary**

JSC-DA/Phil Engelauf summarized FD4 mission events, including 1) the unberth and installation of the Multipurpose Logistics Module (MPLM), 2) the focused inspection using the Orbiter Boom Sensor Subsystem (OBSS) and data downlink, 3) inspection data downlink for Wing Leading Edge System (WLES), and 4) extravehicular activity (EVA)-1 preparation and overnight 10.2 pounds per square inch (psi) cabin repress. Only six of the requested 11 OBSS inspection locations were performed due to timeline constraints. One of these six was missed due to the Pan and Tilt (P&T) drift situation.

Mr. Engelauf reported that no new failures with operational impacts have been logged. Mission STS-114 is proceeding with the nominal timeline.

**C. ISS**

JSC-OA/Kirk Shireman reported ISS Program is working the following anomalies:

- MPLM Pressure Anomaly – This issue will be worked in the post-docked stage.
- Control Moment Gyroscope (CMG) – There have been four CMG anomalies, including one occurrence during the MMT meeting.

**D. Mission Integration Status**

JSC-MO/Robert Galvez, STS-114 Flight Manager, in relating consumables transfer activity, noted that 1) the hardware setup for nitrogen (N<sub>2</sub>) transfer is complete, 2) the current oxygen (O<sub>2</sub>) margin is 21 hours, and 3) two contingency water containers (CWCs) and two portable water reservoirs (PWRs) are complete. He added that an additional flight day would help in providing timeline margin to address hardware transfer changes.

**E. Orbiter and Government-Furnished Equipment (GFE) Status**

JSC-MV/Steve Poulos reported that the Leading Edge Structure Subsystem/Reinforced Carbon-Carbon (LESS/RCC) Problem Resolution Team (PRT) is now tracking three of the original five potential impacts. One, previous thought of as an impact has been screened out. The Wing Leading Edge Impact Detection System (WLEIDS) team has identified ten areas of interest for RCC inspection. All RCC inspection requested is for the port side, panels 6, 7, and 10.

**F. Integrated Anomalies/Issues Summary**

MSFC-MP71/Helen McConnaughey presented the SE&I Integrated Anomalies list, located on the MMT website at:

[http://sspweb.jsc.nasa.gov/webdata/mmtmeeting/flt/114/050729.1300\\_D4/12\\_Integrated\\_Anomalies\\_Issues\\_Summary.pdf](http://sspweb.jsc.nasa.gov/webdata/mmtmeeting/flt/114/050729.1300_D4/12_Integrated_Anomalies_Issues_Summary.pdf)

**G. Action 114-MMT-005 Power-down Options For A Potential Additional Flight Day**

Action 114-MMT-005 to Mission Operations Directorate (MOD), to review and present power-down options for a potential additional FD, was closed. Mr. Engelauf reported that currently there are 21 hours of margin (O<sub>2</sub> limited) due to the Booster Fan Bypass development test objective (DTO), and putting the KU to standby when not needed. If the extra day is added, MOD recommends putting it between FD9 and 10. It is highly likely that the cryo margin will be available without significant impacts. A decision from MMT is requested by FD7.

**H. Action 114-MMT-004 Impacts If The Mission Resulted In A Delay In STS-121**

Action 114-MMT-004 to ISS, to review the impacts if the mission resulted in a delay in STS-121, was closed. Mr. Shireman reported ISS Program would like MMT to consider the Shuttle staying an extra day so that additional transfers could be accomplished. The following three CHITs were opened regarding these transfers:

- CHIT 3011 – Modification of MPLM transfer
- CHIT 3013 – Optimization of Mid-deck transfer
- CHIT in work – Preparing rotary joints motor controller (RJMC) hardware for potential EVA.

ISS would also like to discuss all items that Shuttle could leave behind. Action 114-MMT-006 was assigned to Flight Operations and Integration to assess the feasibility of

changes to Mid-deck and MPLM stowage, and to provide an impact assessment of increasing the mission by an additional docked day. The action is due July 31, 2005.

**I. Debris Data Collection and Processing**

Ms. McConnaughey reviewed screenings in progress, following by the viewing of videos from the Left and Right Solid Rocket Booster (SRB) external Tank (ET) Camera.

**J. TPS Damage Summary**

Boeing-KSC/Dan Bell summarized the TPS Damage Assessment, and showed photos and diagrams of the following identified areas:

- Protruding Ceramic Shim Lower Forward Fuselage (Site 133-01) – Potential for early transition.
- Protruding Gap Filler at Lower Forward Fuselage (Site 134-01) – Potential for early transition.
- Protruding material on Side Forward Fuselage (Site 136-02) – This material is currently being identified.
- Blanket Damage Near Window 1 – Discussions have started regarding the potential for an EVA for thermal repair of the blanket. This is a low heating environment. It is unclear if this damage is the result of an impact or a failure in performance. Photos indicate there is a hole in the batting. Currently, it is not believed that the bonding has given away at the bond line, as there is no red color showing.
- Right hand NLGD Tile Damage – The primary thermal barrier is still intact.
- Left Wing Tile Damage – This has been flagged for inspection. Preliminary data has the depth at 1.7”.
- Right Wing Chine Tile Damage – Preliminary data has the depth at .27”.
- Left hand Inboard Elevon Tile Damage – Imagery indicates this is very shallow.
- Protruding Blanket on Vertical Tail – This is a new item.

**K. Reusable Solid Rocket Motor (RSRM)/ SRB Post-Launch Preliminary Hardware**

MSFC-MP01/Mike Rudolphi gave a summary of the propulsion status. Preliminary data indicates Main Propulsion System (MPS) performance on launch was nominal, as well as flight dynamics, loads, and thermal profiles. RSRM/SRB assessments also indicate nominal conditions.

**L. Management Decisions Summary**

No management decisions were made at today's MMT. Mr. Hale polled the MMT and received concurrence that FD5 should proceed as planned with scheduled EVAs.

**M. Conclusion**

Mr. Hale indicated the next MMT is scheduled for 1:00 p.m. CDT, Saturday, July 30, 2005.

Detailed information on all assigned actions for this meeting can be found on the MMT Action log, located on the MMT web site at:  
[http://sspweb.jsc.nasa.gov/webdata/mmtmeeting/flt/114/050729.1300\\_D4/actionlog.pdf](http://sspweb.jsc.nasa.gov/webdata/mmtmeeting/flt/114/050729.1300_D4/actionlog.pdf)

The MMT web site is available at <http://sspweb.jsc.nasa.gov/mmt/>.

The meeting adjourned at 3:06 p.m. CT.

MMT: July 29, 2005

**Minutes Prepared By:**

<u>Brenda S. Johnson</u>	<u>July 29, 2005</u>
Minutes Writer	Date

**Approvals:**

<u>Eddie King</u>	<u>July 29, 2005</u>
MMT Secretary	Date

<u>J. J. Conwell</u>	<u>July 29, 2005</u>
Customer Support Room (CSR) Duty Officer	Date

## MEETING ATTENDANCE ROSTER

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MEETING TITLE: STS-114 MMT Flight Day 04

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Ron Swan	EA	32528
Chuck Shum	MO	3546

## MEETING ATTENDANCE ROSTER

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